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Remark:**(A) Background:**

The subject invention disclosed several important improvements of the table format technology claimed in the parent U.S. Patent 5,867,818. The table format technology had now been matured into a commercial programming technology trade marked as "Easy Format®" and being used by over thousands of microcontrollers programmers worldwide. For the convenience of typing, the term "Easy Format" mentioned hereunder in this response is considered to be equivalent to "Easy Format®".

Close evaluation of the claims, it can observed that almost all the subject claims recited improved characteristics on top of the interactive state and path tables previously claimed in the issued parent U.S. Patent 5,867,818. Therefore the fundamental job required in the examination process is to evaluate if the depending parent technology satisfied the requirements of 35 U.S.C. 101? If the multiple interactive tables characteristics of the parent technology is patentable under 35 U.S.C. 101, then the depending subject claims satisfy the requirements of 35 U.S.C. 101.

(B) The difficulty faced by the examiner:

This application is the FWC of U.S. Application 09/169,462 filed 10/09/98 which claimed priority of the issued U.S. Patent 5,867,818. It means the subject application had been idled in the PTO for over 8 years and now assigned to a new examiner. Although Easy Format is now a popular programming tool used by over thousand of programmers worldwide to program microcontrollers, it is very obvious that the examiner has no working experience with the Easy Format technology. Therefore it is reasonable that the examiner has great difficulty to believe that tables of instructions filled by a programmer (or a user) can become a tool for a computing device to communicate with a programmer and to understand what the programmer wants the computing device to do. Accordingly the examiner feels that the cooperative and interactive "state" and "path" instructions as defined in the specification are merely abstract ideas. An abstract idea is some idea that is "abstract", has no practical function or value.

(C) Well known FACT:

Although the skeptical feeling of the examiner how several interactive tables can tell the computer what to perform according to the wish of a programmer is very understandable, the examination process should recognize the **FACT** that the cooperative and interactive state and

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path tables filled with instructions can really be compiled into computer executable codes. The method depended by the subject claims provides practical functions – allow the user to tell the computing devices what to do according to the preprogramming objectives of a programmer. The claimed technology has physical claim limits:

1. *Cooperative and interactive state and path instructions described;*
2. *State and path instructions submitted to a computer in table format.*

It is a **FACT** that programs written with these claimed limitations can be compiled into codes executable by a computing device for the computing device to perform the desirable jobs, therefore not abstract ideas. Although the applicant had submitted solid evidence that the depending programming steps are NOT "abstract ideas" being used in the field, the difficulty being faced by the applicant was that the latest office action failed to provide any comment nor response to the solid evidence previously submitted in the response dated 01/30/2003.

(D) Solid Supporting Evidences:

The examiner is respectfully requested to reevaluate the following evidences that are more than enough to prove that the depending interactive state and path tables programming method are real world **WORKING** methods, and therefore **NOT** abstract ideas:

- (1) The depending characteristics of Easy Format programming method or technology (characterized by interactive state and path instructions, often presented into table format) as recited in claims 21 to 40 in published parent U.S. Patent 5,867,818 had already been acceptable by the PTO. Then what is the reason for the subject claims depending on a technology recognized by the PTO previously can suddenly become "abstract ideas" at later examination when improvements depending on the parent technology are later submitted?
- (2) Because of the useful depending technology of interactive state and path tables, U.S. Patent 5,867,818, had been licensed by many differently microcontroller manufacturers. It had generated royalty for an USA company for over six years. How can an abstract idea be licensed for such a long time and being used by over thousand of programmers worldwide?
- (3) Working examples of Easy Format programming tool (characterized by interactive state and path instructions, may be further presented into table format) were provided in the CD ROM submitted together with the response dated 01/30/2003. This is another strong evidence that the depending technology is not an abstract idea.

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(4) Easy Format "compilers" capable to convert table format instructions into microcomputer executable codes were provided in the CD ROM previously submitted. This is another strong evidence that the depending technology is no an abstract idea.

(5) As Easy Format technology is now licensed and utilized by many different microcomputer manufacturers over the world (please refer to web site: www.easyformat.com). Different Easy Format compilers capable to convert table format instructions into microcomputer executable codes are also available to be downloaded from the web sites of these licensees.

(6) Patents of the subject application and also the parent applicant had been issued in Taiwan - a foreign patent office where most licensees (microcontroller manufacturers) located. Taiwan is well known to be very strict in granting microcomputer and supporting programming technology related patents. Copy of this issued patent (claiming the subject application as the priority application) with important words translated had been submitted in the previous response 01/30/2003. This is another strong evidence that the fundamental Easy Format technology of the subject application is not merely an abstract idea.

(7) In fact, the applicant is now in the final stage of entering another license agreement with an existing licensee, to further license this pending patent application, so as for the licensee to make use of the improved features of the Easy Format technology claimed in the subject application. Why does a licensee willing to license a technology if it is merely an abstract idea?

(E) Conclusion of Interview

The examiner indicated that there had been new examination guideline published for programming related technology. This are also specific formats for a software related claim required to overcome a rejection under 35 U.S.C. 101. Accordingly the examiner offered the courtesy to email the applicant this guideline and also the proper wording format for software related claims. The information are very useful and the applicant expressed his most sincere thanks to the courtesy of the examiner.

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(F) Evaluation of information supplied by the examiner

Listed below are the findings of the applicant after carefully reviewing these guidelines as well as the allowable software format provided by the examiner.

(1) Allowable format of software program

The allowable format of software program is related to "computer program" stored in a "computer readable medium". The only claims directing to a pure computer program are claims 89 to 91. Accordingly to the information provided by the examiner, the term "computer program" in claim 89 is amended to a "system comprising a computer accessible memory means or media storing a computer program", with the characteristics of said computer program further elaborated. All other claims are NOT related to pure computer software.

(2) Characteristics of the other claims

Characteristics of the depending Easy Format technology recited in the claims are mostly steps requiring a programmer to personally and interactively defining the instructions of multiple state and path tables, to define an active state, and/or to execute a path in response to receiving a qualifier of a state so as to complete the programming job. Therefore they are not pure software programs to be stored on a computer readable medium. These claims are then compared with the "Interim Guideline for Examination of Patent Applications for Patent Subject Matter Eligibility", the reference provided by the examiner.

(G) Five types of characteristics patentable under 35 U.S.C. 101

Listed below is a quotation of section IV. C. 2. a. of the interim guideline:

a. Practical Application by Physical Transformation

The examiner first shall review the claim and determine if it provides a transformation or reduction of an article to a different state or thing. If the examiner finds such a transformation or reduction, the examiner shall end the inquiry and find that the claim meets the statutory requirements of 35 U.S.C. 101.

Listed below are the analysis of the subject claims. It was respectfully submitted that the following five characteristics recited in the subject claims proved that these claims satisfy the requirements of 35 U.S.C. 101.

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(1) Characteristic A - Transformation of pre-computing and post computing results:

As supported with evidences (D) above, Easy Format programming steps are proved to enable a computing device to perform according to a preprogramming objective. Before the Easy Format programming steps the computing device is **NOT** able to perform any action according to preprogramming objective as described in the specification, after the Easy Format programming steps are applied, the computing device is capable of performing the preprogramming objective defined by the programmer. This is a solid evidence of transformation. The following claims recited Characteristic A: Claims 114 to 119; 148 to 153

(2) Characteristic B - Transformation of qualified responses:

It had been explicitly recited in the claims that the computing device is capable of executing a path when a qualifying condition listed (by a programmer) in a first table is satisfied. Supported with evidences (D) above, and as described in the specification of the subject application, Easy Format programming steps are proved to enable a computing device to provide response according to different qualification conditions encountered. The response is provided by programmer according to the instructions entered to the path table. Be able to response to a qualifying condition and to execute a path defined by the programmer is a transformation performed by the computing device. The following claims recited Characteristic B: Claims 92 to 113; 154 to 169; 171 and claim 175.

(3) Characteristics C - Dual core system

It had been explicitly recited in the claims that the system comprises a first processor connected to a second processor, with said first processor supported by Easy Format programming method. The result is to reduce the loading of the main processor and also to reduce development time. This technology is nowadays known as dual core system. This specific system configuration, obviously satisfied the requirement to provide a practical application that produces a useful, concrete and tangible result as mentioned in section IV. C. 2. b. of the interim guideline. The following claims recited Characteristic C: Claims 88 to 88; 129 to 147

(4) Characteristic D - Dual computer devices system

It had been explicitly recited in the claims that the system comprises a first computer device connected to a remote second computer device through a communication link, with said first

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computer device to download codes derived from an Easy Format program to said second computer device. The result is to distribute codes to a computing device that allows easy program modification with Easy Format programming steps. This specific system configuration, obviously satisfy the requirement to provide a practical application that produces a useful, concrete and tangible result as mentioned in section IV. C. 2. b. of the interim guideline. The following claims recited Characteristic D: Claims 86 to 88; 120 to 128 and claim 176.

(5) Characteristic E – Custom label programming procedure

It had been explicitly recited in the claims that the programming procedure comprises a step to establish custom label or expression to state or path labels. The result is to provide a user friendly Easy Format programming environment that improves the efficiency of program writing and debugging. This improved feature of Easy Format programming is also found to be applicable to many other different programming methods. This specific programming steps, obviously satisfy the requirement to provide a practical application that produces a useful, concrete and tangible result as mentioned in section IV. C. 2. b. of the interim guideline. The following claims recited Characteristic E: Claims 170 to 175

Since the above characteristics are recited in the subject claims for satisfying the requirements 35 U.S.C. 101, together with the solid evidences submit in section (D) above proving the technology the subject claims depend on is in FACT statutory, the ground for the subject claims to be rejected under 35 U.S.C. 101 is respectfully requested to be withdrawn.

Although the examiner had provided great assistance to provide the latest examination guideline for the reference of the applicant, it is respectfully submitted that the subject application was first filed over 8 years ago awaiting examination by the PTO. Since many guideline are revised and published in the recent three years, excessively pushing the application to comply with the new requirements of latest guideline may require substantial amendment of the specification and may cause the issue of "new matter". This will provide excessive unfair burden to the applicant.

Finally, the applicant is always available to answer any further Easy Format related technical question the examiner may encounter during the examination process. The applicant also

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wishes to express his most sincere thanks again to the friendly courtesy offered by the examiner to help the applicant to overcome the 35 U.S.C. 101 ground of rejection.

End of Remark